July 2017

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Joshua Onaade OJO
University of Lagos, Akoka, Yaba., onaade@gmail.com

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By

OJO, Joshua Onaade, CLN, PhD
University of Lagos, Unilag Main Library,
Technical Services Department,
Akoka, Yaba
onaade@gmail.com

PEDRO, Austin Taye CNL
National Museum, Onikan, Lagos.
Taiped70@yahoo.com

and

OLANIYI, O. T. Mrs.
Federal College of Education (Technical), College Library,
Technical Services Department, Akoka, Yaba.

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Abstract:

This paper attempts to analyse the appraisal of electronic readiness for information delivery services, utilization, benefits and challenges for development of Museums and Monuments in Nigeria. Descriptive survey research was adopted for this study; the target population for the research was 784 museums professionals. Out of six-geopolitical zone which made up of Nigeria, two-geographical zone of national museum were selected for random sampling. Total enumeration sampling technique was used for the purpose of sampling procedure. Findings revealed that appraisal of e-readiness is important to Museum because of its level of availability and strong predictor on how well a museum can perform in the service delivery. Hypothesised relationship was tested using Pearson Moment Correlation Multiple Regression Analysis including Multivariate Analysis of Variance (MANOVA). Results had also shown that there was significant relationship between appraisal of e-readiness resources, (that is r=597***, N=200, <01). It also means that electronic information resources service delivery, benefits of using electronic and challenges of using electronic resources were significant (F(5,194)=32,116; R=.673, R2=.453, Adji.R2=0.439; R<.05). It implies that museums professionals need to adequately and effectively use electronic resources, in the course of establishing the significance effect of e-readiness utilization of service delivery or otherwise. The result substantiated the complimentary roles of appraisal of e-readiness resources and the benefits of using the available e-resources. The study had shown that some challenges of using electronic resources had significant effect on e-readiness. This means that an e-readiness appraisal would provide policy makers with a detailed scored card of their economy's competitiveness relative to its international counterparts.

Keywords: Electronic Readiness, Information Delivery Services, Policy makers, Utilization, National Commission, Museums and monuments

Introduction:

National Commission for Museums and Monuments (NCMM) which was established by decree 77 of 1979 as a corporate body with powers to administers museums and museum centres, spells out penalties for the destruction, unauthorised alteration and removal of monuments in Nigeria. Asides National Museums owned by the Federal government there are other states and privately owned museums which are open to the public; museums are also found in our higher institutions of learning mainly the universities.

A museum is a complex institution, and to come to term with a definition is difficult, one`s definition would depend on either one`s likes or dislikes for museums. Eboreime (2008) argued that museum was the cultural equivalent of the central bank of any nation. Museums are memory institution which organise cultural and intellectual record. Museums' collections contain the memory of peoples, communities, institutions and individuals, the scientific and cultural heritage, and the products throughout time of our imagination, craft and learning. They join us to our ancestors and they are our legacy to future generations. They are used by the child, the scholar, and the citizen, by the business person, the tourist and the learner. These in turn are creating the heritage of the future. Memory institutions contribute directly and indirectly to the prosperity through support for learning in areas like commerce, tourism, and personal fulfilment etc.

According to Dempsey (2000), Museums have changed from the imposing sites designed to preserve relics and to exhibit collections, to places where a mix of enjoyment, learning and experience outcomes are also pursued. Moscardo (1996) opines that Museums play a significant role in culture and tourism worldwide. Through museums, societies represent their relation to their own history and to that of other cultures and people. Lumley (1988) contends that in addition to preserving and studying collections, "museums exist for the purpose of serving the community." Corroborating this fact, Ames (1986) submits that with increased levels of competition in the culture and tourism industry, it is becoming more important for museum professionals to identify the variables that will enhance the attraction and retention of museum visitors.

Museums are social places, where people would not go alone, but to witness other people sharing the same experience, and in most cases, to enjoy a pleasant activity with friends, loved ones, partners and colleagues. Bradburne (1998) argues that until the electronic technology will allow several people sharing the same digital domains in a true interactive way (using embedded technologies or ambient intelligence; for instance), most of the electronic exhibitions are enjoyed as a solitary experience, or as a passive viewer. The social experience of visiting a museum should become the personal activity of getting more into the subject. Electronic technology tries to create a model of use which integrates the electronic environment into a social experience.

However, one significant of electronic readiness in museums is that objects displayed can reach different communities in a relatively short period of time and explore even further the diversities of people across countries and link them together. Electronic museums affords

members of the public who may be incapacitated to visit museum centres the opportunity of doing the same online and at ease. It makes rich document together with complex but simplified information possible (Bandelli, 2002)

Research Questions

1. The study will focus essentially on the following research questions:
2. What is the level of availability of electronic readiness in the Museums?
3. How often do you use electronic resources in the Museum?
4. What types of information services are available in the Museum?
5. What are the benefits of using electronic readiness resources in Museum?
6. What are the challenges of using electronic readiness resources in National Commission for Museums and Monuments of Nigeria

Hypotheses

The following null hypothesis will guide the conduct of this study and they will be tested at .05 level of significance

Ho_1: There is no significant relationship between appraisal of electronic readiness and use of electronic readiness resources in museum.

Ho_2: There is no significant relationship between appraisal of electronic readiness and utilisation of electronic resources in museum.

Ho_3: There is no significant relationship between appraisal of electronic readiness and Information services delivery in museum.

H_{04}: There is no significant relationship between appraisal of electronic readiness and benefits of using electronic resources in museum.

H_{05}: There is no significant relationship between appraisal of electronic readiness and Challenges of using electronic readiness resources in museum.

Literature Review:

Museums are store houses of the treasures of human race. They store and hold confidence the memories of this race, which represents the world`s peoples, their cultures, identity, history and hopes indifferent forms including the material evidence. Museums are of different types. They are classified by governing authorities according to the areas they serve, their users, what they keep and how they present them. Most importantly, the commonest things among museums are collections (Bradburne, 1998) Collections are gathered or collected material

evidences of man, his environment and heritage of the past in the present coming together in both cultural and natural expression in a museum, preserved for the purpose of their potential values. These material evidences are objects, artefacts or relics; they are starting point of a museum, of its field, and essentially, of any activity of the museum. The worth of a museum is determined by its collections (Liasu, 2003) Museums like other agents of cultural transmission and knowledge such as schools and libraries, preserves the tangible evidence of man`s history, creativity and the physical aspects of the world it inhabits, gives information about the past environment of the materials then attract, entertain and arouse curiosity amongst the people (Okpoko, 2006). Communications technology and interdisciplinary endeavours are transforming museums through, changing them into educational resources of the first order by virtue of the multifaceted value of their operations, their flexibility in adapting to all ages and interest, and their accessibility to the public at large (Solana, 1981).

Museum as an active force in social, cultural and economic regeneration is by no means new. Museums are themselves centres of creativity whose collections and exhibitions are often designed by staff trained in one of the creative industries and whose talents often inspirer others working in the creative sphere or who aspire to join it. Museums as agents of social cultural and economic regeneration need further interrogation which all museums have not wholeheartedly supported. Hence, electronic technology is the only access to the enhancement of wider participation in museums. Museums must seek to become relevant to a wider audience. Museum staff should ask how the collections can potentially make a difference to the lives of people who are at risk from social exclusion, how museum services can improve their audience`s quality of life and how our activities within the museum can have an impact on creating positive and social change by developing electronic access.

Museums are fast changing often in the past few decades, shifting focus from collections to the interactive experience gained by the visitors as a result of their museum experience. Electronic technology has been major tool to facilitate this change, while it varies and continuously changing. As a result of the relatively new use of electronic technology by museums and it's constantly changing nature, the use of electronic has brought numerous benefits in helping and allowing visitor-focused interaction (Ames, 1986) The electronic has opened up a powerful new medium and line of communication for museums all around the world, both for potential users and for museum administrators. A museum`s use of the World Wide Web currently takes many forms; a means of access to the catalogue, or as a collection in the form of a virtual museum. It provides access to a large number of

databases, directories of organisations, providing museum logical services and products, museum curators and museum professionals throughout the world (Wersig, 2001) Museum collections have become more accessible worldwide, and access is available to larger proportions of a museum`s wealth of resources.

Museums are crafting and following a comprehensive strategy to ensure that they can keep pace with even the most proven technologies. A comprehensive electronic strategy should include plans to use technology not only for learning and interpretation, but also for marketing, revenue generation, digitisation and digital preservation as well as plans for the general technology infrastructure (Bowen, 2002) Funding for technology projects is too often done outside operational budgets. Museums have been challenged to find a comfortable position in evolving digital environment, as the focus of their activities has shifted from developing collections to managing access to information. It is clear to all involved on the World Wide Web, that electronic museum is indispensable in contemporary time. Hence, we can describe electronic museum as introduction of technology in the collection objects, navigation of site, data storage, bibliographical material etc. for ease assess through websites. It can also be seen as the accessibility to a nation`s cultural heritage that are stored in electronic form. Electronic will aid museums educational objectives and use of portable electronic devices guides to supplement the usual labelling of exhibits and self-guided tours.

In the trend of electronic readiness world, few of the humanities have withstood the march of technology more tenaciously than museum. Museums tend to think of themselves more as custodians than communicators, now as long as electronic emerge. Museums, like other institutions, have succumbed to the propensity of our society to amass data in all its forms. Information and Communication Technologies (ICT) are affecting the modus operandi of entire industries (Crowston and Myers 2004). In recent years, museums have been given the opportunity to reach out to audiences beyond their physical vicinities with the help of the electronic readiness. Most museums maintain websites with varying degrees of museums services. With the inception of electronic, museums gained the ability to provide images and information about their collections online as a preview to the visit.

The rise in knowledge intensity is being driven by the combined forces of the information technology revolution and the increasing pace of technological change. Globalisation is being driven by national and international deregulation, and by the Information Technology (IT) related revolution (Houghton and Sheehan 2000) in order for a country to gain the

benefits offered by IT, technology must be implemented and used effectively across society and the economy. Moreover, countries face the threat of being left behind if they do not address the growing digital divides both between and within countries (Montazer 2006). Many developing country leaders have embraced IT as an engine for growth and development to help their nations, and they are driving the necessary changes to make that happen (Montazer 2006). Decision-makers need to know where the country currently stands in terms of IT availability and use, so they can plan toward their goals to knowledge economy or knowledge society. Governments and development aid professionals often frame this discussion in terms of "e-readiness", or how ready a country is to gain the benefits offered by IT in term of policy, infrastructure and ground-level initiatives (Montazer 2006). An e-readiness process based on an objective assessment that leads to sound e-strategies can offer a path for converting good intentions into planned action that brings real changes to people`s lives (bridge.org 2005).

E-readiness is a relatively new concept that has been given impetus by the rapid rate of internet penetration throughout the world, and the dramatic advances in uses of information technology (IT) in business and industry (Choucril 2003). The e-readiness concept was originated by the intent to provide a unified framework to evaluate the breadth and depth of the digital divide between more and less developed or developing countries during the latter part of 1990s (Mutulaa and Brakel, 2006). The first efforts in defining e-readiness were undertaken in 1998 by the Computer Systems Policy (CSPP) when it developed the first e-readiness assessment tool know as Readiness Guide for Living in the Networked World (CSPP, 2001). CSPP defined e-readiness with respect to a community that had high-speed access in a competitive market; with constant access and application of ICTs in schools, government, offices, businesses, healthcare facilities and homes; user privacy and online security; and government policies which are favourable to promoting connectedness and use of the network (Bridges.org 2001). "E-readiness" is shorthand for the extent to which a country`s business environment is conducive to Internet-based opportunities (EIU, 2002).

Methodology:

Descriptive survey research was adopted for this study, the target population for the study was seven hundred and eighty-four (784) museum professional employees between grade level 08 – 15 with minimum of bachelor degree or its equivalent, out of six-geopolitical zone

which made up of Nigeria, two geopolitical zones will be selected on random sampling which is southwest and north central geopolitical zone of national museum. The study is limited to conservators, ethnographers, museum educators, curators, archaeologist, museum visitors and tourists because they belong to the category of museum staff who, by the virtue of their professional calling, education and experience. Total enumeration sampling technique is adopted for the purpose of this study; total enumeration technique adopted as the sampling procedure. It is chosen because of the small number of population of professional museum staff involved which is put as at 784 as at 2012 (National Commission for Museums and Monuments of Nigeria, Staff nominal roll 2012). At least, 16 National Museum are involved in the geopolitical zones examined. This appears to be well informed to be able to respond well to the research instrument. The research instrument used consist of 200 questionnaires distributed to the museum staff and tourist who are adult of 18 years and above that pay visit to museums.

Data Analysis: Descriptive statistics such as mean and standard deviation was used to analyse the data collected for the professional career, using frequency counts and percentages for easy interpretation. In addition, the hypotheses were tested too inferential statistics using Correlation Analysis including multiple regression analyses of Variance with the aid of SPSS.

Discussion of Findings

Demographic Variables of Museum Professionals

The analysis of self-administered questionnaire provides the following personal information of museum professionals.

Table 1: Distribution of respondents by Grade level

Grade level	Frequency	Percentage
8-10	127	63.5
11-13	63	31.5
14-16	10	5.0
Total	200	100.0

The highest grade level 63.5% as shown in Table 1 belonged to grade level 08-10. The significance of grade level in this context is that more museum professionals are university graduates, young university graduates are known to be more ready to innovations than older ones. Ideally, all grade level is expected to be electronic utilization ready because they are museum professionals.

Table 2: Distribution of respondents by Museum professional career

Museum professional career	Frequency	Percentage
Curator	40	20.0
Ethnographer	19	9.5
Archaeologist	13	6.5
Museum educator	66	33.0
Conservator	26	13.0
Heritage officer	16	8.0
Documentation officer	20	10.0
Total	200	100.0

Table 2 above had shown that professional career were differ in museum, but related areas of profession existed in museum. The careers were designed with the intent of satisfying the manpower as well as the culture and tourism development needs of the country. Professionals were expected to make choices among the specialization on offer and choices may differ from individuals. The results had shown that among professionals sample, 33.0 percent were museum educator while the least among the professional sample, 8.0 percent were heritage officers. These findings showed that heritage and other professions were not popular in the museum.

Ho_1: There will be no significant relationship between appraisal of e-readiness and Use of e-readiness resources

Variable	Mean	Std. Dev.	N	R	P	Remark
Appraisal of e-readiness	16.3450	6.0845	200	.597**	.000	Sig.
Use of e-readiness resources	16.6950	5.7948				

** Sig. at .01 level

Table 3, had shown that there was significant relationship between appraisal of e-readiness and use of e-readiness resources ($r = .597^{**}$, $N= 200$, $P < .01$). Hence, use of e-readiness resources had influenced appraisal of e-readiness in the study. The study had raised an issue affecting the appraisal of e-readiness in museum. Use of e-readiness resources is related to appraisal of e- readiness. This implied that museum professionals need to adequately and effectively use electronic resources. However, several studies have linked e-readiness appraisal with use of e-readiness resources. (Donovan 1997) warns museum not to think that simply providing access to museum collection databases (and object-centric information) would be enough. Therefore, the null hypothesis was rejected.

Ho_2: There will be no significant relationship between Appraisal of e-readiness and Utilization of electronic resources

Variable	Mean	Std. Dev.	N	R	P	Remark
Appraisal of e-readiness	16.3450	6.0845	200	-.467**	.000	Sig.
Utilization of electronic resources	17.7600	8.8733				

** Sig. at .01 level

Table 4, had shown that there was a negative significant relationship between Appraisal of e-readiness and Utilization of electronic resources (r = -.467**, N= 200, P < .01). The utilization of electronic resources had influenced appraisal of e-readiness in the study. However, several studies have linked e-readiness appraisal with the utilization of electronic resources in the current Internet age, competitiveness of countries is being increasingly associated with their level of e-readiness (Economist Intelligence Unit and IBM Corporation 2004). Countries with high level of e-readiness can use the Internet to improve services and create new opportunities and have a competitive edge over those whose levels of e-readiness are low. For example, countries such as Denmark, United Kingdom, Sweden, Norway, Finland and the United States that are ranked top in e-readiness have also competitive business (EIU and IBM Corporation 2004). The (Economist Intelligence Unit Limited 2003) pointed out that globally, information and communication technologies (ICTs) had changed the nature of global relationships, sources of competitive advantage and opportunities for economic and social development. The null hypothesis was therefore rejected.

Ho_3: There will be no significant relationship between Appraisal of e-readiness and Information services delivery.

Variable	Mean	Std. Dev.	N	R	P	Remark
Appraisal of e-readiness	16.3450	6.0845	200	.407**	.000	Sig.
Information services delivery	21.0400	4.1936				

** Sig. at .01 level

Table 5, showed that there was significant relationship between appraisal of e-readiness and Information services delivery (r = .407**, N= 200, P < .01). The findings had

showed that, information services delivery had influenced appraisal of e-readiness in the study. The study implied that by delivering value, enhancing satisfaction, behavioral outcomes such as positive word-of-mouth will provide a multiplier effect to market share (Rust and Kannan, 2003.) The increased prevalence of electronic has allowed museums to consider and use of ICT as a channel, to disseminate objects, exhibitions and museums services to current or potential visitors and researchers, however little is known of the user attitude toward this practice. The null hypothesis was rejected.

Ho_4: There will be no significant relationship between Appraisal of e-readiness and Benefits of using electronic resources

Variable	**Mean**	**Std. Dev.**	**N**	**R**	**P**	**Remark**
Appraisal of e-readiness	16.3450	6.0845	200	.069	.335	n.s.
Benefits of using electronic resources	26.9650	6.9118				

Table 6: had shown that there is no significant relationship between appraisal of e-readiness and benefits of using electronic resources ($r = .069$, $N= 200$, $P > .05$). This indicated that appraisal of e-readiness is important to museum because its level can be a strong predictor of how well a museums can perform in the service delivery. An e-readiness appraisal would provide policy makers with a detailed scorecard of their economy`s competitiveness relative to its international counterparts, X. Bui (2003) in his findings, by and large, countries are striving to become inclusive global information societies where all persons without distinction are empowered to create, receive, share and utilize information for their economic, social, cultural and political development (Consulting and Audit Canada, 2004). The null hypothesis was therefore accepted.

Ho_5: There will be no significant relationship between Appraisal of e-readiness and Challenges of using electronic resources

Variable	**Mean**	**Std. Dev.**	**N**	**R**	**P**	**Remark**
Appraisal of e-readiness	16.3450	6.0845	200	-.171*	.015	Sig.
Challenges of using	33.8750	11.0562				

electronic resources						

* Sig. at .05 level

Table 7: had indicated, that was a negative significant relationship between appraisal of e-readiness and challenges of using electronic resources (r = -.171*, N= 200, P < .05). Findings had shown that, museum professionals involved the enormously complex business of contextualizing and indexing and retrieving images. Supporting this finding, multimedia applications forma museums tours to recreations of eighteenth-century Montreal to the exploration of Piero della Frandesca`s fresco legend of the True cross. Bearman (1991); Trant (1993) pose special problems of storage and access beyond the occasion of their initial development and use as working databases. The null hypothesis was rejected

Ho_6: There will be no joint effect of Use of e-readiness resources, Utilization of resources, Information services delivery, Benefits of using electronic resources and Challenges of using electronic resources on Appraisal of e-readiness.

Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	3336.411	5	667.282	32.116	.000
Residual	4030.784	194	20.777		
Total	7367.195	199			

R = .673

R^2 = .453

Adj R^2 = .439

Table 8: had shown that the joint effect of use of e-readiness resources, utilization of resources, information services delivery, benefits of using electronic resources and challenges of using electronic resources on appraisal of e-readiness was significant (F(5,194) = 32.116; R = .673, R^2 = .453, Adj. R^2 = 0.439; P < .05). About 45% of the variation in appraisal of e-readiness was jointly accounted for by the independent variables. In view of this, utilisation of e-resources usage, information services delivery, benefits of using e-readiness and challenge of using electronic resources will have significant effect on appraisal of e-readiness. The null hypothesis was rejected.

Ho_6 b: There will be no relative effect of Use of e-readiness resources, Utilization of resources, Information services delivery, Benefits of using electronic resources and Challenges of using electronic resources on Appraisal of e-readiness

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig.
	B	Std. Error	B		
(Constant)	6.270	1.960		3.198	.002
Use of e-readiness	.382	.072	.364	5.304	.000
Utilization of resources	-.220	.051	-.321	-4.355	.000
Information services delivery	.220	.102	.152	2.163	.032
Benefits	.158	.079	.180	2.002	.047
Challenges	-3.828E-02	.049	-.070	-.776	.439

Table 9: The result above indicated that relative contribution of each of the independent variables on the dependent: use of e-readiness ($\beta = .364$, $P < .05$), utilization of resources ($\beta = -.321$, $P < .05$), information services delivery ($\beta = .152$, $P < .05$), benefits ($\beta = .180$, $P < .05$) and challenges ($\beta = -.070$, $P > .05$) respectively.

Use of e-readiness, utilization of resources, information services delivery and benefits of using electronic resources are significant, while a challenge of using electronic resources was not. It implies that no significant of utilization of e-resources, information services delivery, benefits of using electronic resources on appraisal of e-readiness except challenges of using electronic resources on appraisal of electronic readiness with significant effect on e-readiness.

Conclusion:

Traditionally museums are expected to engage electronic readiness to enhance learning, experience and entertainment, the sector still needs more innovative ideas and further research. Museums certainly not have sufficient in-house expertise to launch an electronic readiness project services without some external help. However it can be argued that an electronic readiness services in museums does not necessarily involve great costs.

Recommendations

In an effort to revitalise the country`s museums culture and tourism agencies can benefit from the following recommendations:

The country`s museums must be electronically technologized taking into account the importance of autonomy and single visitors in a museum context. Electronic is proposed to be able to personalise the experience and allow the consumer to move beyond the constraint of museum managers. Interactive concepts of edutainment and entertainment will enhance service provision. Adequate infrastructural facilities commensurate to electronic capacity must be provided to the museums. This can be possible through improved funding of the museums. Museums managers should source fund rather than relying on government for grants all of the time.

The Federal Government must consider ways of attracting qualified personnel into helms of affairs of museums. Also, efforts must be geared towards the development and enhancement of teaching ICT courses in the Institute of Museology so to foster e-readiness. Each state of the nation must attempt to have effective and efficient ministry of culture and tourism to foster trans-cultural experiences in their respective states. This is essential because of the saliency of culture to the prevailing security situation of the nation most especially in the North-East and South-South part of the nation. Museum terminologies should be re-codified to accommodate new e-lexical items such as e-Museum, e-Artefacts and e-Objects. Incorporation of these terms into the Museum register is not odd since e-Commerce, e-Government, e-Payment, e-Journal and a host of others in many professions have found their ways into e-Terminologies.

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